

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATS (ICT)

(19) World Intellectual Property Organization International Bureau



## 

(43) International Publication Date 10 June 2004 (10.06.2004)

**PCT** 

(10) International Publication Number WO 2004/048754 A1

(51) International Patent Classification7:

\_

E21D 9/00

(21) International Application Number:

PCT/KR2003/002456

(22) International Filing Date:

14 November 2003 (14.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10-2002-0073221

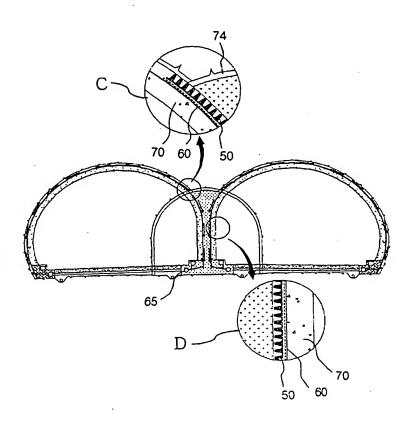
22 November 2002 (22.11.2002) KR

(71) Applicant (for all designated States except US): HYUN ENGINEERING AND CONSTRUCTION CO., LTD. [KR/KR]; 403 Bekma-Mart, 745 Madu-dong, Goyang-shi, 411-350 Gyeonggi-do (KR). (71) Applicants and

- (72) Inventors: YUN, Seok-Ryul [KR/KR]; Room 101, 742-8 Bono-dong, Ansan-shi, 426-808 Gyconggi-do (KR). SEO, Dong-Hyun [KR/KR]; 301-1201 Gangchon-village, 787 Madu-dong, Goyang-shi, 411-350 Gyeonggi-do (KR). KWON, Oh-Hyun [KR/KR]; 102-2001 Gyeongnam Apartment, 967 Dogok-dong, Gangnam-gu, 135-270 Seoul (KR).
- (74) Agent: HEO, Beom; 4 floor Namyang-Bilding, 1571-5 Seocho-dong, Seocho-gu, 137-070 Seoul (KR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: STRUCTURE OF INTERMEDIATE WALL OF THREE ARCH EXCAVATED TUNNEL AND METHOD FOR CONSTRUCTING THE SAME



(57) Abstract: Disclosed are a structure of an intermediate wall of a three arch excavated tunnel, which effectively exhausts subterranean water from a peripheral ground, and a method for constructing the tunnel. The method comprising the steps of: (a) excavating an upper portion of a central tunnel 10; (b) excavating a lower portion of the central tunnel 10; (c) forming an intermediate wall 20 and grouting a gap formed in the intermediate wall 20; (d) excavating an upper portion of a left main tunnel 30; (e) excavating an upper portion of a right main tunnel 40; (f) excavating a lower portion of the left main tunnel 30; (g) excavating a lower portion of the right main tunnel 40; and (h) installing a drain board 50 and a waterproof layer 60 and casting lining concrete 70 therein so that the tunnel is easily drained through drain pipes 65 and residual water pressure is eliminated.